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12-27-01

RAW SEQUENCE LISTING

DATE: 08/29/2001

PATENT APPLICATION: US/09/426,783A

TIME: 14:04:07

Input Set : A:\C103031.app

Output Set: N:\CRF3\08292001\I426783A.raw

3 <110> APPLICANT: Gonsalves, Dennis
4 Pang, Sheng-Zhi
6 <120> TITLE OF INVENTION: TOSPOVIRUS RESISTANCE IN PLANTS
8 <130> FILE REFERENCE: 19603/10303
10 <140> CURRENT APPLICATION NUMBER: 09/426,783A
11 <141> CURRENT FILING DATE: 1999-10-22
13 <150> PRIOR APPLICATION NUMBER: 08/495,484
14 <151> PRIOR FILING DATE: 1995-09-25
16 <150> PRIOR APPLICATION NUMBER: PCT/US94/01046
17 <151> PRIOR FILING DATE: 1994-01-27
19 <150> PRIOR APPLICATION NUMBER: 08/010,410
20 <151> PRIOR FILING DATE: 1993-01-29
22 <160> NUMBER OF SEQ ID NOS: 35
24 <170> SOFTWARE: PatentIn Ver. 2.1
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28 <212> TYPE: DNA
29 <213> ORGANISM: Artificial Sequence ✓
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32 <223> OTHER INFORMATION: Description of Artificial Sequence: probe
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50 <213> ORGANISM: Artificial Sequence ✓
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53 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
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61 <212> TYPE: DNA
62 <213> ORGANISM: Artificial Sequence ✓
64 <220> FEATURE:
65 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
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72 <211> LENGTH: 2216
73 <212> TYPE: DNA

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74 <213> ORGANISM: Tomato spotted wilt virus

76 <400> SEQUENCE: 5

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79 ctctggctaa gggttccaaa ggttttgaag cagggtttcca ttcagaaatt gttcaagggt 180
80 gcaggagatg aaacaaacaa aacattttat ttatctattg cctgcattcc aaaccataac 240
81 agtggtgaga cagctttaaa cattactggt atttgcaagc atcagctccc aattcgcaaa 300
82 tgcaaagctc cttttgaatt atcaatgatg ttttctgatt taaaggagcc ttacaacatt 360
83 gttcatgacc cttcataccc caaaggatcg gttccaatgc tctggctcga aactcacaca 420
84 tctttgcaca agttctttgc aactaacttg caagaagatg taatcatcta cactttgaac 480
85 aaccttgagc taactcctgg aaagttgatg ttaggtgaaa gaaccttgaa ttacagtga 540
86 gatgcctaca aaaggaaata tttcctttca aaaacacttg aatgtcttcc atctaacaca 600
87 caaactatgt cttactttaga cagcatccaa atcccttcat ggaagataga ctttgccaga 660
88 ggagaaatta aaatttctcc acaatctatt tcagttgcaa aatctttggt aaagcttgat 720
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90 taatcttgct ttgtccagct ttttctaatt atgttatggt tattttcttt ctttacttat 840
91 aattatttct ctgtttgtca tctctttcaa attcctcctg tctagtagaa accataaaaa 900
92 caaaaaataa aatgaaaat aaaattaaaa taaaataaaa tcaaaaaatg aaataaaaaac 960
93 aacaaaaaat taaaaaacga aaaacaaaaa agaccgaaa gggaccaatt tggccaaatt 1020
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107 cctccaatcc tgtctgaagt tttctttatg gtaattttac caaaagttaa atcgctttgc 1860
108 ttaataacct tcattatgct ctgacgattc tttaggaatg tcagacatga aataacgctc 1920
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110 ttctgatctt cctcaaaact aaggtctttg ccttggtgtc acaaagcaac aatgctttcc 2040
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112 taactcaagg tgcgaaagtg caactctgta tcccgcagtc gtttcttagg ttcttaatgt 2160
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118 <212> TYPE: DNA

119 <213> ORGANISM: Tomato spotted wilt virus

121 <400> SEQUENCE: 6

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123 tcaagctttt gtcaaagctt ctactgattc taatttcaag ctgagcctct ggctaagggt 120
124 tccaaagggt ttgaagcaga tttccattca gaaattgttc aaggttgacg gagatgaaac 180
125 aaataaaaca ttttatttat ctattgcctg cattccaaac cataacagtg ttgagacagc 240
126 tttaaacatt actgttattt gcaagcatca gctcccaatt cgtaaagtga aaactccttt 300

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127 tgaattatca atgatgtttt ctgatttaaa ggagccttac aacattattc atgatccttc 360
128 atatccccaaggagggtttc atgctctgct tgaaactcac acatcttttg cacaagttct 420
129 ttgcaacaac ttgcaagaag atgtgatcat ctacaccttg aacaacctag agctaactcc 480
130 tggaaagtta gatttaggtg aaataacttt gaattacaat gaagacgctt acaaaaggaa 540
131 atatttcctt tcaaaaacac ttgaatgtct tccatctaac atacaaacta tgtcttattt 600
132 agacagcatc caaatccctt cctggaagat agactttgcc aggggagaaa ttaaaatttc 660
133 tccacaatct atttcagttg caaaatcttt gttaaactctt gatttaagcg ggattaaaaa 720
134 gaaagaatct aagattaagg aagcatatgc ttcaggatca aaatgatctt gctgtgtcca 780
135 gctttttcta attatgttat gtttattttc tttctttact tataattatt tttctgtttg 840
136 tcattttctt caaatccctc ctgtctagta gaaaccataa aaacaaaaat aaaaataaaa 900
137 taaaatcaaa ataaaaataa aatcaaaaaa tgaaataaaa gcaacaaaaa aattaaaaaa 960
138 caaaaaacca aaaaagatcc cgaaaggaca attttggcca aatttggggt ttgtttttgt 1020
139 tttttgtttt tttgtttttt gttttatttt ttatttttat ttttattttt attttatttt 1080
140 attttatggt tttgttggtt ttgttatttt gttattttatt aagcacaaca cacagaaagc 1140
141 aaactttaat taaacacact tatttaaaat ttaacacact aagcaagcac aaacaataaa 1200
142 gataaagaaa gctttatata tttataggct tttttataat ttaacttaca gctgctttta 1260
143 agcaagttct gtgagttttg cctgtttttt aaccccaaac atttcataga acttggttaag 1320
144 ggtttctact gtaatgtcca tagcaatact tccttttagca ttaggattgc tggagctaag 1380
145 tatagcagca tactctttcc ccttcttcac ctgatcttca ttcatttcaa atgcttttct 1440
146 tttcagcaca gtgcaaactt ttcctaaggc ttccctgggt tcatacttct ttgggtcgat 1500
147 cccgagatcc ttgtattttg catcctgata tatagccaag acaacactga tcatctcaaa 1560
148 gctatcaact gaagcaataa gaggttaagct acctcccagc attatggcaa gcctcacaga 1620
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153 <210> SEQ ID NO: 7

154 <211> LENGTH: 260

155 <212> TYPE: PRT

156 <213> ORGANISM: Tomato spotted wilt virus

158 <400> SEQUENCE: 7

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160 1 5 10 15
162 Leu Leu Met Ser Ala Glu Asn Asn Ile Met Pro Asn Ser Gln Ala Ser
163 20 25 30
165 Thr Asp Ser His Phe Lys Leu Ser Leu Trp Leu Arg Val Pro Lys Val
166 35 40 45
168 Leu Lys Gln Val Ser Ile Gln Lys Leu Phe Lys Val Ala Gly Asp Glu
169 50 55 60
171 Thr Asn Lys Thr Phe Tyr Leu Ser Ile Ala Cys Ile Pro Asn His Asn
172 65 70 75 80
174 Ser Val Glu Thr Ala Leu Asn Ile Thr Val Ile Cys Lys His Gln Leu
175 85 90 95
177 Pro Ile Arg Lys Cys Lys Ala Pro Phe Glu Leu Ser Met Met Phe Ser
178 100 105 110
180 Asp Leu Lys Glu Pro Tyr Asn Ile Val His Asp Pro Ser Tyr Pro Lys
181 115 120 125
183 Gly Ser Val Pro Met Leu Trp Leu Glu Thr His Thr Ser Leu His Lys
184 130 135 140
186 Phe Phe Ala Thr Asn Leu Gln Glu Asp Val Ile Ile Tyr Thr Leu Asn
187 145 150 155 160

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189 Asn Leu Glu Leu Thr Pro Gly Lys Leu Asp Leu Gly Glu Arg Thr Leu
190          165          170          175
192 Asn Tyr Ser Glu Asp Ala Tyr Lys Arg Lys Tyr Phe Leu Ser Lys Thr
193          180          185          190
195 Leu Glu Cys Leu Pro Ser Asn Thr Gln Thr Met Ser Tyr Leu Asp Ser
196          195          200          205
198 Ile Gln Ile Pro Ser Trp Lys Ile Asp Phe Ala Arg Gly Glu Ile Lys
199          210          215          220
201 Ile Ser Pro Gln Ser Ile Ser Val Ala Lys Ser Leu Leu Lys Leu Asp
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214 <213> ORGANISM: Tomato spotted wilt virus
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219 aaccccaaac atttcataga acttggttaag ggtttcactg taatgttcca tagcaatact 180
220 tccttttagca ttaggattgc tggagctaag tatagcagca tactctttcc cttcttcac 240
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222 ttccctggtg tcatacttct ttgggtcgat ccgagatcc ttgtattttg catcctgata 360
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226 agtttcctca acaagcctga ccctgatcaa gctatcaagc cttctgaagg tcatgtcagt 600
227 ggctccaatc ctgtctgaag ttttctttat ggtaatttta ccaaaagtaa aatcgctttg 660
228 ctttaataacc ttcattatgc tctgacgatt cttcaggaat gtcagacatg aaataatgct 720
229 catctttttg atctggtcaa ggttttccag acaaaaagtc ttgaagttga atgctaccag 780
230 attctgatct tcctcaaaact caaggtcttt gccttgtgtc aacaaagcaa caatgctttc 840
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236 <212> TYPE: DNA
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243 aaataaaaca ttttatttat ctattgcctg cattccaaac cataacagtg ttgagacagc 240
244 tttaaacatt actgttattt gcaagcatca gctcccaatt cgtaaagtga aaactccttt 300
245 tgaattatca atgatgtttt ctgattttaa ggagccttac aacattattc atgatccttc 360
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253 gctttttcta attatgttat gtttattttc tttctttact tataattatt tttctgtttg 840
254 tcatttcctt caaatccctc ctgtctagta gaaaccataa aaacaaaaat aaaaataaaa 900
255 taaaatcaaa ataaaataaa aatcaaaaaa tgaaataaaa gcaacaaaaa aattaaaaaa 960
256 caaaaaacca aaaaagatcc cgaaaggaca attttggcca aatttggggt ttgtttttgt 1020
257 tttttgtttt tttgtttttt gtttttattt ttatttttat ttttattttt attttatttt 1080
258 attttatgtt tttgttgttt ttgttatttt gttattttatt aagcacaaca cacagaaagc 1140
259 aaactttaat taaacacact tatttaaaat ttaacacact aagcaagcac aaacaataaa 1200
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262 ggtttcactg taatgttcca tagcaatact tccttttagca ttaggattgc tggagctaag 1380
263 tatagcagca tactctttcc ccttcttcac ctgatcttca ttcatttcaa atgcttttct 1440
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302 <212> TYPE: PRT
303 <213> ORGANISM: Tomato spotted wilt virus
305 <400> SEQUENCE: 12
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309 Trp Gly Ser Thr Ala Ser Gly Lys Ser Ile Val Asp Ser Tyr Trp Ile
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VERIFICATION SUMMARY

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